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Please find below and/or attached an Office communication concerning this application or proceeding.

	Office Action Summary	Application No.	Applicant(s)
		09/894,224	VAIRAVAN, KANNAN P.
		Examiner	Art Unit
		David G. Cervetti	2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>27 June 2001</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) _____ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-50</u> is/are rejected.

7) ☒ Claim(s) <u>20 and 30-48</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>27 June 2001</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All b) ☐ Some * c) ☐ None of:

　　　　1. ☐ Certified copies of the priority documents have been received.

　　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they include the following reference character(s) not mentioned in the

description: figure 6A, numbers 600, 625, 635, 645; figure 6B, numbers 645, 655, 680;

figure 7, numbers 815 (perhaps 615 was intended), 710; figure 8, number 810; figure 9,

numbers 920, 925, 930. Corrected drawing sheets in compliance with 37 CFR 1.121(d),

or amendment to the specification to add the reference character(s) in the description in

compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if

only one figure is being amended. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they do not include the following reference sign(s) mentioned in the

description: page 29, line 21, reference character 350; page 35, line 18, reference

character 615 (perhaps 815 was intended). Corrected drawing sheets in compliance

with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of

the application. Any amended replacement drawing sheet should include all of the

figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in

the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the

drawing figures. If the changes are not accepted by the examiner, the applicant will be

notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Specification

The abstract of the disclosure is objected to because of the following

informalities: line 7, "bother", perhaps "both" was intended.

Appropriate correction is required.

The disclosure is objected to because of the following informalities: page 3, line

18, "xDSL", page 5, lines 15-16, "DSL", "POTS", "MAN", "ISP", "LAN", page 15, line 21,

"MAC", page 16, line 1, "IEEE", line 5, "IP", line 11, "VLANs", page 21, line 4,

"TCP/UDP", page 23, line 22, "CPU", page 27, line 18, "ARCFOUR", while well known in

the art, these terms have not been defined; page 13, reference character 250 refers to

"packet bus" and to "parallel connections"; page 25, line 16 and line 25, refer to "packet

bus" with two different reference characters; page 25, line 10, "VTP", perhaps "VPT"

was intended; page 29, line 21, reference character 350, perhaps 450 was intended;

page 32, line 1 and line 3, "routing manager 530", perhaps 520 was intended; page 33,

line 11, "security processor 520", perhaps 235 was intended; page 34, line 20, reference

character 825, perhaps 625 was intended; page 35, line 6, reference character 865,

perhaps reference character 665 was intended.

Appropriate correction is required.

The disclosure is objected to because it includes reference to drawings by name (page 27, line 4, "Description of Security Processor", page 30, line 3, "Description of the System Processor", etc.), the detailed description of the invention shall refer to the different views by specifying the numbers of the figures and to the different parts by use of reference letters or numerals (preferably the latter). See MPEP § 608.01(g).

Claim Objections

Claim 20 is objected to because of the following informalities: line 1, states "wherein the routing table is stores routing". Appropriate correction is required.

Claims 30-48, from page 46 to page 49 are objected to because of the following informalities: the numbering is incorrect. They have been renumbered 32-50 for the purpose of this document. Newly renumbered claims 34, 37-44, 46-47,49-50 have been treated as referring to claim 33 for the purpose of this document. Newly renumbered claims 35 and 36 have been treated as referring to claim 34 for the purpose of this document. Newly renumbered claim 45 has been treated as referring to claim 44 for the purpose of this document. Newly renumbered claim 48 has been treated as referring to claim 47 for the purpose of this document. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation "wherein the routing table" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is generally narrative and indefinite, failing to conform with current U.S. practice. It appears to be a literal translation into English from a foreign document and has many grammatical and idiomatic errors.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-6, 20-21, 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and further in view of Freund.

Regarding claim 1, Lenney et al. teach an integrated networking device

comprising: a first access interface within a plurality of access interfaces, the first

interface coupled to a first network and adapted to transmit packets to the first network

and receive packets from the first network (column 4, lines 5-12); a second access

interface within the plurality of access interfaces, the second interface coupled to a

second network and adapted to transmit packets to the second network and receive

packets from the second network, the second network operating on a different medium

than the first network (column 4, lines 5-12); a packet processor coupled to the plurality

of access interfaces, the packet processor adapted to identify a packet type and provide

packet security within the device (figure 2, numbers 210a-h), a switching fabric coupled

to the plurality of access interfaces, the packet processor, and a plurality of network

ports, the switching fabric adapted to transmit packets to a corresponding network port

according to a routing protocol within the switching fabric (column 2, lines 24-27); and a

system processor coupled to the plurality of access interfaces, the switching fabric, the

packet processor, and the security processor, the system processor adapted to manage

the networking device (column 6, lines 1-10). Lenney et al. does not disclose expressly

the packet processor comprising; a packet-filtering firewall for isolating and analyzing

packets according to their content in order to prevent unauthorized access to an

attached network; a stateful-filtering firewall for isolating and analyze packets according

to their state information in order to prevent unauthorized access to an attached

network; a security processor coupled to the packet processor, the security processor

adapted to encrypt packets prior to transmission onto the first network and decrypt packets after reception from the first network.

Freund teaches the packet processor comprising; a packet-filtering firewall for isolating and analyzing packets according to their content in order to prevent unauthorized access to an attached network (column 2, lines 15-30); a stateful-filtering firewall for isolating and analyze packets according to their state information in order to prevent unauthorized access to an attached network; a security processor coupled to the packet processor, the security processor adapted to encrypt packets prior to transmission onto the first network and decrypt packets after reception from the first network (column 2, lines 15-30).

Lenney et al. and Freund are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to add security to the switching system to ensure secure communication over the network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Freund with the system of Lenney et al. for the benefit of secure network communication to obtain the invention as specified in claim 1.

Regarding claim 2, Lenney et al. teach the device of claim 1 wherein the first access interfaces couples to a copper-based network (column 4, lines 13-31).

Regarding claim 3, Lenney et al. teach the device of claim 1 wherein the first access interface couples to a fiber optic network (column 4, lines 13-31).

Regarding claim 5, Lenney et al. teach the device of claim 1 wherein the packet

processor comprises a network address translation module for managing networking

policy, configuration, and service for at least one of the attached networks (column 1,

lines 26-60).

Regarding claim 6, Lenney et al. teach the device of claim 5 wherein the network

address translation module comprises: an address resolution protocol module for

converting an Internet Protocol address to a data link controlled address (column 5,

lines 62-67); a device configuration table for storing configuration data regarding at least

one device on the first network (column 5, lines 62-67, column 6, lines 1-10); a user

information table for storing user and customer information (column 6, lines 56-65).

Regarding claim 20, Lenney et al. teach the device of claim 1 wherein the routing

table is stores routing information for transmitting packets to at least one port within the

plurality of ports (column 5, lines 61-67, column 6, lines 1-10).

Regarding claim 21, Lenney et al. teach the device of claim 1 wherein the

switching fabric comprises a switching table that stores switching information for

transmitting packets to at least one port within the plurality of ports (column 6, lines 1-

10).

Regarding claim 25, Lenney et al. teach the device of claim 1 wherein the system

processor comprises a network management module for managing the first network

attached to the networking device (column 1, lines 26-44).

Regarding claim 26, Lenney et al. teach the device of claim 25 wherein the

network management module further receives and responds to management

information from agents operating on at least one device on the first network according

to the Simple Network Protocol (column 5, lines 61-67, column 6, lines 1-20).

Regarding claim 27, Lenney et al. teach the device of claim 26 wherein

management information from agents is stored within a management information

database (column 5, lines 61-67, column 6, lines 1-20).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et

al. and Freund as applied to claim 1 above and further in view of Haas.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above.

However, Lenney et al. and Freund do not disclose expressly the device of claim 1

wherein the first access interface a transceiver adapted to communicate with a wireless

network.

Haas teaches the device of claim 1 wherein the first access interface a

transceiver adapted to communicate with a wireless network (column 3, lines 30-45,

and column 4, lines 34-55).

Lenney et al., Freund, and Haas are analogous art because they are directed to

a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to have a transceiver adapted to communicate with a wireless network.

Therefore, it would have been obvious to a person of ordinary skill in the art to

combine the teachings of Haas with the system of claim 1 for the benefit of

communication with a wireless network to obtain the invention as specified in claim 4.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and Freund as applied to claim 5 above and further in view of Cudak et al.

Lenney et al. and Freund teach the limitations as set forth under claim 5 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 5 wherein the network address translation module dynamically assigns Internet Protocol addresses to at least one device on an attached network.

Cudak et al. teach the device of claim 5 wherein the network address translation module dynamically assigns Internet Protocol addresses to at least one device (column 9, lines 48-67) on an attached network.

Lenney et al., Freund, and Cudak et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to dynamically assign Internet Protocol addresses to devices on an attached network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Cudak et al. with the system of claim 5 for the benefit of dynamically assigning IP addresses to devices on an attached network to obtain the invention as specified in claim 7.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and Freund as applied to claim 1 above and further in view of Willenz et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1

wherein the packet processor comprises a box configuration module for storing

descriptive data relating to the inter/intra-networking device and corresponding ports.

Willenz et al. teach the device of claim 1 wherein the packet processor comprises

a box configuration module for storing descriptive data relating to the inter/intra-

networking device and corresponding ports (column 3, lines 24-48).

Lenney et al., Freund, and Willenz et al. are analogous art because they are

directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to store data relating to the networking device and the corresponding

ports.

Therefore, it would have been obvious to a person of ordinary skill in the art to

combine the teachings of Willenz et al. with the system of claim 1 for the benefit of

storing data relating the network switching device and the corresponding ports to obtain

the invention as specified in claim 8.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et

al. and Freund as applied to claim 1 above and further in view of Shwed et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above.

However, Lenney et al. and Freund do not disclose expressly the device of claim 1

wherein the packet processor comprises a security policy database for storing various

standards for specifying packet-filtering rules based on information found within a

header of a packet.

Shwed et al. teach the device of claim 1 wherein the packet processor comprises a security policy database for storing various standards for specifying packet-filtering rules based on information found within a header of a packet (column 3, lines 7-29).

Lenney et al., Freund, and Shwed et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to specify packet filtering rules for information found within a header of a packet.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Shwed et al. with the system of claim 1 for the benefit of specifying packet filtering rules and either accept or reject the passage of the packets to obtain the invention as specified in claim 9.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and Freund as applied to claim 1 above and further in view of Hershey et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the packet processor comprises an anti-virus agent for monitoring at least one connected device on the first network for computer viruses.

Hershey et al. teach the device of claim 1 wherein the packet processor comprises an anti-virus agent for monitoring at least one connected device on the first network for computer viruses (column 26, lines 59-67, column 27, lines 1-14).

Lenney et al., Freund, and Hershey et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to add an anti-virus agent for monitoring a device for computer viruses.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Hershey et al. with the system of claim 1 for the benefit of anti-virus monitoring to obtain the invention as specified in claim 10.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and Freund as applied to claim 1 above and further in view of Conklin et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the packet processor comprises an intrusion detection module for inhibiting hacking into the inter/intra-networking device by monitoring packets received by the networking device.

Conklin et al. teach the device of claim 1 wherein the packet processor comprises an intrusion detection module for inhibiting hacking into the inter/intra-networking device by monitoring packets received by the networking device (column 4, lines 45-52).

Lenney et al., Freund, and Conklin et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to add an intrusion detection module for inhibiting hacking into the networking device.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Conklin et al. with the system of claim 1 for the benefit of detecting, monitoring, and tracking unauthorized activities on a data communications network to obtain the invention as specified in claim 11.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and Freund as applied to claim 1 above and further in view of Tai.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the packet processor comprises a virtual private network policy and table module for implementing a virtual private network.

Tai teaches the device of claim 1 wherein the packet processor comprises a virtual private network policy and table module for implementing a virtual private network (column 2, lines 42-53).

Lenney et al., Freund, and Tai are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement a virtual private network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Tai with the system of claim 1 for the benefit of implementing a virtual private network to obtain the invention as specified in claim 12.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Tai as applied to claim 12 above and further in view of Schneider et al.

Lenney et al., Freund, and Tai teach the limitations as set forth under claim 12 above. However, Lenney et al., Freund, and Tai do not disclose expressly the device of claim 12 wherein the virtual private network policy and table module comprises: an Internet Protocol header authentication module for providing connectionless integrity and data origin for Internet Protocol data packets; an encapsulated security payload module for conveying encrypted data in an Internet Protocol datagram; and an encryption key module for establishing security associations and cryptographic keys within the first network.

Schneider et al. teaches the device of claim 12 wherein the virtual private network policy and table module comprises: an Internet Protocol header authentication module for providing connectionless integrity and data origin for Internet Protocol data packets (column 15, lines 31-59); an encapsulated security payload module for conveying encrypted data in an Internet Protocol datagram (column 4, lines 6-22); and an encryption key module for establishing security associations and cryptographic keys within the first network (column 19, lines 26-45).

Lenney et al., Freund, Tai, and Schneider et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an Internet Protocol header authentication module, an encapsulated security payload module, and an encryption key module to implement a virtual private network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Schneider et al. with the system of claim 12 for the benefit of implementing a secure virtual private network to obtain the invention as specified in claim 13.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and Freund as applied to claim 1 above and further in view of Chuah et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the packet processor comprises a layer two tunneling module for enabling Internet service providers to operate virtual private networks within the first network.

Chuah et al. teach the device of claim 1 wherein the packet processor comprises a layer two tunneling module for enabling Internet service providers to operate virtual private networks within the first network (column 1, 15-54, column 3, 10-22).

Lenney et al., Freund, and Chuah et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use layer two tunneling to enable operation of a virtual private network within a first network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Chuah et al. with the system of claim 1 for the benefit of implementing a virtual private network within a first network to obtain the invention as specified in claim 14.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. and Freund as applied to claim 1 above and further in view of Perlman.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the security processor comprises an encryption/decryption module for creating a message for digital signatures corresponding to packets received from the packet processor.

Perlman teaches the device of claim 1 wherein the security processor comprises an encryption/decryption module for creating a message for digital signatures corresponding to packets received from the packet processor (column 5, lines 1-30).

Lenney et al., Freund, and Perlman are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an encryption/decryption module for creating a message for digital signatures corresponding to packets received.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Perlman with the system of claim 1 for the benefit of creating a message for digital signatures corresponding to packets received to obtain the invention as specified in claim 15.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Perlman as applied to claim 15 above and further in view of Davis.

Lenney et al., Freund, and Perlman teach the limitations as set forth under claim 15 above. However, Lenney et al., Freund, and Perlman do not disclose expressly the device of claim 15 wherein the encryption/decryption module verifies digital signatures according to the ARCFOUR standard.

Davis teaches the device of claim 15 wherein the encryption/decryption module verifies digital signatures according to the ARCFOUR standard (column 2, lines 35-57, column 4, lines 47-56).

Lenney et al., Freund, Perlman, and Davis are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to verify digital signatures according to the ARCFOUR standard.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Davis with the system of claim 15 for the benefit of verifying digital signatures according to the ARCFOUR standard to obtain the invention as specified in claim 16.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., and Freund as applied to claim 1 above and further in view of Turtiainen et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the security processor comprises an internet key exchange module dynamically negotiating security associations and enabling secure communication.

Turtiainen et al. teach the device of claim 1 wherein the security processor comprises an internet key exchange module dynamically negotiating security associations and enabling secure communication (paragraphs 0004-0006).

Lenney et al., Freund, and Turtiainen et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the Internet Key Exchange to dynamically negotiate security associations to enable secure communication.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Turtiainen et al. with the system of claim 1 for the benefit of enabling secure communication to obtain the invention as specified in claim 17.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., and Freund as applied to claim 1 above and further in view of Chen et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the security processor comprises an authentication header module for

encrypting and decrypting packets according to the authentication header protocols and

standards.

Chen et al. teach the device of claim 1 wherein the security processor comprises

an authentication header module for encrypting and decrypting packets according to the

authentication header protocols and standards (column 3, lines 57-67, column 4, lines

1-21).

Lenney et al., Freund, and Chen et al. are analogous art because they are

directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to encrypt/decrypt packets according to the authentication header

protocols and standards.

Therefore, it would have been obvious to a person of ordinary skill in the art to

combine the teachings of Chen et al. with the system of claim 1 for the benefit of

implementing secure communications between devices on a network to obtain the

invention as specified in claim 18.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney

et al., and Freund as applied to claim 1 above and further in view of Aziz et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above.

However, Lenney et al. and Freund do not disclose expressly the device of claim 1

wherein the security processor comprises an encapsulating security payload module for

encrypting and decrypting packets according to the encapsulation security payload

protocols and standards.

Aziz et al. teach the device of claim 1 wherein the security processor comprises an encapsulating security payload module for encrypting and decrypting packets according to the encapsulation security payload protocols and standards (column 2, lines 9-18 and 37-45).

Lenney et al., Freund, and Aziz et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to encrypt/decrypt packets according to the encapsulation security payload protocols and standards.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Aziz et al. with the system of claim 1 for the benefit of implementing secure communications between devices on a network to obtain the invention as specified in claim 19.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., and Freund as applied to claim 1 above and further in view of Nessett et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the system processor comprises a graphical user interface for allowing a network manager to configure and modify network settings on the networking device.

Nessett et al. teach the device of claim 1 wherein the system processor comprises a graphical user interface for allowing a network manager to configure and modify network settings on the networking device (column 8, lines 7-26).

Lenney et al., Freund, and Nessett et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to provide a graphical user interface to a networking device to allow a network manager to configure and modify network settings on the networking device.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Nessett et al. with the system of claim 1 for the benefit of allowing a network manager to configure and modify network settings on the networking device to obtain the invention as specified in claim 22.

Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., and Freund as applied to claim 1 above and further in view of Jorgensen.

Regarding claim 23, Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the system processor comprises a network manager for controlling file transfers between a first device and a second device, the first device operating on the first network.

Jorgensen teaches the device of claim 1 wherein the system processor comprises a network manager for controlling file transfers between a first device and a second device, the first device operating on the first network (column 48, lines 57-67, column 49, lines 1-10).

Lenney et al., Freund, and Jorgensen are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to control file transfers between a first device and a second device on a network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Jorgensen with the system of claim 1 for the benefit of transferring files between a first device and a second device to obtain the invention as specified in claim 23.

Regarding claim 24, Jorgensen teaches the device of claim 23 wherein the network manager for managing hypertext files in at least one device on the first network (column 51, lines 10-42). The rationale for combining is the same as expressed above.

Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., and Freund as applied to claim 1 above and further in view of Li et al.

Regarding claim 28, Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the system processor comprises a routing manager for controlling routing functions performed within the inter/intra-networking device.

Li et al. teach the device of claim 1 wherein the system processor comprises a routing manager for controlling routing functions performed within the inter/intra-networking device (column 8, lines 14-34).

Lenney et al., Freund, and Li et al are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a routing manager for controlling routing functions performed within the inter/intra-networking device.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Li et al. with the system of claim 1 for the benefit of controlling routing functions performed within the networking device to obtain the invention as specified in claim 28.

Regarding claim 29, Li et al. teach the device of claim 28 wherein the routing manager supports host address and performs host address translation (column 8, lines 14-34).

Regarding claim 30, Li et al. teach the device of claim 29 wherein the routing manager comprises: an open shortest path first module for determining a path across an attached network according to the Open Shortest Path First Protocol (column 8, lines 30-35); and a routing information module for determining a path across an attached network according to the smallest hop count between source and destination (column 8, lines 30-35).

Regarding claim 31, Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the system processor comprises a routing manager for reporting multicast group memberships to any immediately neighboring multicast routing device.

Li et al. teach the device of claim 1 wherein the system processor comprises a routing manager for reporting multicast group memberships to any immediately neighboring multicast routing device (column 14, lines 50-65, figure 12).

Lenney et al., Freund, and Li et al are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to report multicast group memberships to any immediately neighboring multicast routing device.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Li et al. with the system of claim 1 for the benefit of reporting multicast group memberships to any immediately neighboring multicast routing device to obtain the invention as specified in claim 31.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., and Freund as applied to claim 1 above and further in view of Jones et al.

Lenney et al. and Freund teach the limitations as set forth under claim 1 above. However, Lenney et al. and Freund do not disclose expressly the device of claim 1 wherein the system processor comprises a routing manager for supporting multiple quality of service packet characteristics and corresponding internal queues.

Jones et al. teach the device of claim 1 wherein the system processor comprises a routing manager for supporting multiple quality of service packet characteristics and corresponding internal queues (column 6, lines 19-38).

Lenney et al., Freund, and Jones et al are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to support multiple quality of service packets.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Jones et al. with the system of claim 1 for the benefit of supporting quality of service packets to guarantee quality of service ("QoS") data transfer as required by a user to obtain the invention as specified in claim 32.

Claims 33, 38, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al. in view of Freund, and further in view of Conklin et al.

Regarding claim 33, Lenney et al. teach a method for networking computing devices operating on a plurality of networks operating on different mediums, the method comprising: receiving a first packet from a first network via a first access interface on a networking device (column 4, lines 5-12); receiving a second packet from a second network via a second access interface on a networking device, the second network operating on a different medium than the first network (column 4, lines 5-12); identifying a packet type corresponding to the first packet (figure 2, numbers 210a-h); applying a network address table to convert an incoming port number to a local Internet Protocol or port value (column 4, lines 32-45); and switching the first packet to a corresponding network port according to a switching table (column 5, lines 62-67, column 6, lines 1-10). However Lenney et al do not expressly disclose applying a packet-filtering firewall to analyze the first packet according to its content in order to prevent unauthorized

access to a device on the first network; applying a stateful-filtering firewall to analyze

the first packet according to its state in order to prevent unauthorized access to the

device on the first network; screening the first packet using a network intrusion detection

sensor to prevent hacking into the device on the first network; storing monitoring data

regarding the first packet for use in managing the first network.

Freund teaches applying a packet-filtering firewall to analyze the first packet

according to its content in order to prevent unauthorized access to a device on the first

network (column 2, lines 15-30); applying a stateful-filtering firewall to analyze the first

packet according to its state in order to prevent unauthorized access to the device on

the first network (column 2, lines 15-30); storing monitoring data regarding the first

packet for use in managing the first network (column 4, lines 40-67, column 5, lines 1-

20). However, Freund does not expressly disclose screening the first packet using a

network intrusion detection sensor to prevent hacking into the device on the first

network.

Lenney et al. and Freund are analogous art because they are directed to a

similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to add security to the switching system to ensure secure communication

over the network.

Therefore, it would have been obvious to a person of ordinary skill in the art to

combine the teachings of Freund with the system of Lenney et al. for the benefit of

secure network communication to obtain the invention as specified above.

The combination of Freund with Lenney et al. does not teach screening the first

packet using a network intrusion detection sensor to prevent hacking into the device on

the first network.

Conklin et al. teach screening the first packet using a network intrusion detection

sensor to prevent hacking into the device on the first network (column 1, lines 50-65).

Lenney et al., Freund, and Conklin et al. are analogous art because they are

directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to add an intrusion detection sensor to prevent hacking into the device on

the first network.

Therefore, it would have been obvious to a person of ordinary skill in the art to

combine the teachings of Conklin et al. with the combination of Freund and Lenney et

al. for the benefit of detecting, monitoring, and tracking unauthorized activities on a data

communications network to obtain the invention as specified in claim 33.

Regarding claim 38, Lenney et al. teach the method of claim 33 further

comprising: creating a configuration table relating to devices on the first network

(column 6, lines 1-10); maintaining the configuration by analyzing management data

within the first packet (column 6, lines 1-10); and using the configuration table to

manage the first network (column 6, lines 1-10).

Regarding claim 43, Conklin et al. teach the method of claim 33 further

comprising scanning the first packet using an intrusion detection sensor to inhibit

hacking into a device on the first network (column 4, lines 45-52).

Claims 34, 37, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above, and further

in view of Kerr et al.

Regarding claim 34, Lenney et al., Freund, and Conklin et al. teach the

limitations as set forth under claim 33 above. However, Lenney et al., Freund, and

Conklin et al. do not disclose expressly the method of claim 33 wherein the step of

identifying a packet type further comprises: identifying whether the first packet is an

Internet Protocol security encrypted packet; decrypting the first packet in order to

determine whether there are errors within the first packet; recover routing information

corresponding to the first packet that may have been lost doe to the errors; determining

whether there is an existing virtual connection in a network corresponding to the first

packet; encrypting the first packet; and transmitting the first packet according to routing

information corresponding to the first packet.

Kerr et al. teach the method of claim 33 wherein the step of identifying a packet

type further comprises: identifying whether the first packet is an Internet Protocol

security encrypted packet (column 1, lines 55-60); decrypting the first packet in order to

determine whether there are errors within the first packet (column 4, lines 20-34);

recover routing information corresponding to the first packet that may have been lost

doe to the errors (column 1, lines 62-67, column 2, lines 1-10); determining whether

there is an existing virtual connection in a network corresponding to the first packet

(column 1, lines 46-61, column 3, lines 20-35, column 4, lines 20-47); encrypting the

first packet (column 4, lines 30-23); and transmitting the first packet according to routing

information corresponding to the first packet (column 4, lines 20-47, column 5, lines 4-10).

Lenney et al., Freund, Conklin et al., and Kerr et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to identify a packet type, determine errors within the packet, recover information, and transmit the packet.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Kerr et al. with the system of claim 33 for the benefit of identifying a packet type, determine errors within the packet, recover information, and transmitting the packet to obtain the invention as specified in claim 34.

Regarding claim 37, Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 wherein the step of identifying a packet-type further comprising: identifying whether the first packet as a wireless packet; determining whether the first packet is part of an existing connection that has been previously authorized; and transmitting packet according to properties of the previously authorized channel.

Kerr et al. teach the method of claim 33 wherein the step of identifying a packet-type further comprising: identifying whether the first packet as a wireless packet (column 1, lines 55-60); determining whether the first packet is part of an existing connection that has been previously authorized (column 1, lines 46-61, column 3, lines 20-35, column 4,

lines 20-47); and transmitting packet according to properties of the previously authorized channel.

Lenney et al., Freund, Conklin et al., and Kerr et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to identify a packet type, determine errors within the packet, recover information, and transmit the packet.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Kerr et al. with the system of claim 33 for the benefit of identifying a packet type and transmitting the packet to obtain the invention as specified in claim 37.

Regarding claim 39, Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 further comprising: creating a user information table containing user and customer information relating to at a device on the first network; maintaining the user information table by analyzing user data within the first packets; and using the user information table to manage at least one device on the first network.

Kerr et al. teach the method of claim 33 further comprising: creating a user information table containing user and customer information relating to at a device on the first network (column 1, lines 62-67); maintaining the user information table by analyzing

user data within the first packets (column 2, lines 1-10); and using the user information

table to manage at least one device on the first network (column 2, lines 1-10).

Lenney et al., Freund, Conklin et al., and Kerr et al. are analogous art because

they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary

skill in the art to create a user information table containing information relating to a

device on the first network.

Therefore, it would have been obvious to a person of ordinary skill in the art to

combine the teachings of Kerr et al. with the system of claim 33 for the benefit of

managing at least one device on the first network to obtain the invention as specified in

claim 39.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney

et al., Freund, Conklin et al., and Kerr et al. as applied to claim 34 above, and further in

view of Chen et al.

Lenney et al., Freund, Conklin et al., and Kerr et al. teach the limitations as set

forth under claim 34 above. Lenney et al., Freund, Conklin et al., and Kerr et al. do not

disclose expressly the method of claim 34 wherein an existing virtual connection is

identified by analyzing an authenticated header corresponding to the first packet.

Chen et al. teach the method of claim 34 wherein an existing virtual connection is

identified by analyzing an authenticated header corresponding to the first packet

(column 3, lines 57-67, column 4, lines 1-21).

Lenney et al., Freund, Conklin et al., Kerr et al., and Chen et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to analyze an authenticated header to determine an existing virtual connection.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Chen et al. with the system of claim 34 for the benefit of identifying a virtual connection by analyzing an authenticated header to obtain the invention as specified in claim 35.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, Conklin et al., and Kerr et al. as applied to claim 34 above, and further in view of Aziz et al.

Lenney et al., Freund, Conklin et al., and Kerr et al. teach the limitations as set forth under claim 34 above. Lenney et al., Freund, Conklin et al., and Kerr et al. do not disclose expressly the method of claim 34 wherein an existing virtual connection is identified by analyzing an encapsulated security payload corresponding to the first packet.

Aziz et al. teach the method of claim 34 wherein an existing virtual connection is identified by analyzing an encapsulated security payload corresponding to the first packet (column 2, lines 9-18 and 37-45).

Lenney et al., Freund, Conklin et al., Kerr et al., and Aziz et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to analyze an encapsulated security payload to determine an existing virtual connection.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Aziz et al. with the system of claim 34 for the benefit of identifying a virtual connection by analyzing an encapsulated security payload to obtain the invention as specified in claim 36.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above, and further in view of Cudak et al.

Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 further comprising dynamically assigning Internet Protocol addresses to at least one device on the first network.

Cudak et al. teach the method of claim 33 further comprising dynamically assigning Internet Protocol addresses to at least one device on the first network (column 9, lines 48-67).

Lenney et al., Freund, Conklin et al., and Cudak et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to dynamically assign Internet Protocol addresses to devices on an attached network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Cudak et al. with the system of claim 33 for the benefit of dynamically assigning IP addresses to devices on an attached network to obtain the invention as specified in claim 40.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above, and further in view of Hershey et al.

Lenney et al., Freund, Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, Conklin et al. do not disclose expressly the method of claim 33 further comprising monitoring at least one device on the first network for viruses using an anti-virus agent.

Hershey et al. teach the method of claim 33 further comprising monitoring at least one device on the first network for viruses using an anti-virus agent (column 26, lines 59-67, column 27, lines 1-14).

Lenney et al., Freund, Conklin et al., and Hershey et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to monitor a device for computer viruses using an anti-virus agent.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Hershey et al. with the system of claim 33 for the benefit of anti-virus monitoring to obtain the invention as specified in claim 41.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above and further in view of Schneider et al.

Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 further comprising configuring port access on the networking device according to a desired security standard.

Schneider et al. teaches the method of claim 33 further comprising configuring port access on the networking device according to a desired security standard (column 3, lines 32-58).

Lenney et al., Freund, Conklin et al., and Schneider et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to configure port access on a networking device according to a desired security standard.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Schneider et al. with the system of claim 33 for the benefit of

configuring port access on a networking device to obtain the invention as specified in claim 42.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above and further in view of Perlman.

Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 further comprising creating a message for a digital signature corresponding to the first packet.

Perlman teaches the method of claim 33 further comprising creating a message for a digital signature corresponding to the first packet. (column 5, lines 1-30).

Lenney et al., Freund, and Perlman are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use an encryption/decryption module for creating a message for digital signatures corresponding to packets received.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Perlman with the system of claim 33 for the benefit of creating a message for digital signatures corresponding to packets received to obtain the invention as specified in claim 44.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, Conklin et al., and Perlman as applied to claim 44 above and further in view of Davis.

Lenney et al., Freund, Conklin et al., and Perlman teach the limitations as set forth under claim 44 above. However, Lenney et al., Freund, Conklin et al., and Perlman do not disclose expressly the method of claim 44 further comprising verifying the digital signature according to ARCFOUR standards.

Davis teaches the method of claim 44 further comprising verifying the digital signature according to ARCFOUR standards (column 2, lines 35-57, column 4, lines 47-56).

Lenney et al., Freund, Conklin et al., Perlman, and Davis are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to verify digital signatures according to the ARCFOUR standard.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Davis with the system of claim 44 for the benefit of verifying digital signatures according to the ARCFOUR standard to obtain the invention as specified in claim 45.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above, and further in view of Jorgensen.

Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 further comprising controlling file transfers between a first and second device, the first device operating on the first network and the file transfer performed according to the File Transfer Protocol.

Jorgensen teaches the method of claim 33 further comprising controlling file transfers between a first and second device, the first device operating on the first network and the file transfer performed according to the File Transfer Protocol (column 48, lines 57-67, column 49, lines 1-10).

Lenney et al., Freund, Conklin et al., and Jorgensen are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to control file transfer between a first and second device according to the File Transfer Protocol.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Jorgensen with the system of claim 33 for the benefit of controlling file transfers between a first and second device according to the File Transfer Protocol to obtain the invention as specified in claim 46.

Claims 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above, and further in view of Bhatia et al.

Regarding claim 47, Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of 33 further comprising creating a Web page stored in a device on the first network.

Bhatia et al. teach the method of 33 further comprising creating a Web page stored in a device on the first network (column 58, lines 1-34).

Lenney et al., Freund, Conklin et al., and Bhatia et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to create a web page in a devise on a first network.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Bhatia et al. with the system of claim 33 for the benefit of dynamically creating a web page to obtain the invention as specified in claim 47.

Regarding claim 48, Bhatia et al. teach the method of claim 47 further comprising maintaining a Web page stored in a device on the first network (column 58, lines 1-34).

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above, and further in view of Li et al.

Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 further comprising reporting multicast group memberships to any immediately neighboring multicasting routing device.

Li et al. teach the method of claim 33 further comprising reporting multicast group memberships to any immediately neighboring multicasting routing device (column 14, lines 50-65 and figure 12).

Lenney et al., Freund, Conklin et al., and Li et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to report multicast group memberships to any immediately neighboring multicast routing device.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Li et al. with the system of claim 33 for the benefit of reporting multicast group memberships to any immediately neighboring multicast routing device to obtain the invention as specified in claim 49.

Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lenney et al., Freund, and Conklin et al. as applied to claim 33 above, and further in view of Jones et al.

Lenney et al., Freund, and Conklin et al. teach the limitations as set forth under claim 33 above. However, Lenney et al., Freund, and Conklin et al. do not disclose expressly the method of claim 33 further comprising switching the first packet according to quality of service characteristics corresponding to the first packet.

Jones et al. teach the method of claim 33 further comprising switching the first packet according to quality of service characteristics corresponding to the first packet (column 6, lines 19-38).

Lenney et al., Freund, Conklin et al., and Jones et al. are analogous art because they are directed to a similar problem solving area, data communications systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to support multiple quality of service packets.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Jones et al. with the system of claim 33 for the benefit of supporting quality of service packets to guarantee quality of service ("QoS") data transfer as required by a user to obtain the invention as specified in claim 50.
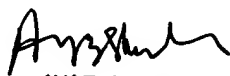
Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David G. Cervetti whose telephone number is (571) 272-

5861. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ayaz R. Sheikh can be reached on (703) 305-9648. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

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Business Center (EBC) at 866-217-9197 (toll-free).

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